BOARD DIVERSITY AND FIRM VALUE; MEDIATING EFFECT OF CSR OF LISTED OIL FIRMS IN NIGERIA

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Abstract: *In this empirical study, the mediating effect of corporate social responsibility (CSR) on the nexus between corporate value and board diversity is investigated. However, hypotheses developed for this study were tested with annualized panel dataset of eight (8) Nigerian listed oil and gas firms in the upstream sector spanning 2012 to 2019. Stakeholder theory was used to underpin the study. The study employed three indicators for board diversity (board professionalism, board nationality and board gender), Tobin's Q and amount spent on CSR. The panel regression results show that looking at the indirect effect in Model One; board diversity has no significant effect on firm value. However, empirical findings indicated that CSR exerts a significant and positive relationship with corporate value. Considering Model Two, the results show that CSR plays a pertinent role in establishing the nexus between corporate value and board diversity, this finding is congruent with stakeholder theory. The study recommends that environmental sensitive firms should maintain an appropriate and balance diverse board as it plays a pertinent and significant role in establishing the nexus between stakeholder relationship and the firms, which can also serve as a mechanism to mitigate manager's opportunistic tendencies behind CSR investment..*

INTRODUCTION

On a global scale, the oil and gas business has orchestrated significant transformation to world economies as a result of these entities' contribution to global energy consumption. This is substantiated by the heavy dependence of the global community on oil and gas supplies to meet present domestic consumption and future speculation (ERDEY et al, 2019). In 2019, reports from World Energy and BP Statistical Review posited that oil in the equivalent of about 583 tonnes (million) is tantamount to global primary consumption of energy. In view of this, 63 percent of global energy supplies are reciprocated by oil and gas production with corresponding global GDP estimated to be $86 trillion according to market research by IBIS World (2019). Therefore, activities of global upstream oil and gas industries cannot be contrived as an undeserved phenomenon. As posited by ZHENG et al. (2016) these entities are specifically characterized due to their technical inclination to upstream complexities.

In Nigeria, this sector alone contributes approximately 65 percent of government income and 88 percent of Nigeria's foreign exchange earnings (KPMG, 2019). Also, the current assessment of commercially viable oil estimated proved reserves to the whopping tune of 37 billion (barrels) in equivalent trillion metric cubic feet (TMC[3]); undoubtedly took Nigeria to the frontier of global oil and gas producer in the collective 10th order of most influential oil-rich nations (Organization of Petroleum Exporting Countries, 2020). Nevertheless, the menace of oil and gas exploitation has been the precipitations for ecological degradations in the species of maritime and terrestrial pollution, while among other things, oil blowout, land eruption, fire disaster, pipeline vandalization, the insurgence of militancy, hostages and abduction of foreign oil and gas investors have been consistent with peculiar diversities in domestically recorded circumstances been faced incessantly in Nigeria.

In 2010, a report by the National Oil Spill Detection & Response Agency (NOSDRA) indicates that nearly 2,400 oil spill cases have been detected between 2006 and 2010 respectively. In the same vein, 13 oil spills recorded in March 2020, in the oil region with its environmental and health implications as cited in the daily newspaper (Thedaily,

2020). The indigenes of this region are the ones taken these oil spillages, which have resulted in severe issues of environmental degradation, reduced people's economic prosperity, and livelihood for decades. In lieu of these multiplying socioeconomic fatalities such as heightened mortality rate, health decadence, and retarded corporate safety that has bedeviled the economic prosperity of Nigeria in an ignoble course, there has been intensively harmonized global uproar to mitigate the dilemma caused by the quantum of these interactions in the collective. Nigeria is mostly regarded globally as heightened environmental polluting as it is currently ranked seventh highest gas flaring country and 10th most polluted country in the world (AIRVISUAL, 2018; WORLD BANK, 2019).

Despite the negative effects of companies operating in the oil and gas sector, they pay less attention to these issues. As a result, stakeholders urge and pressurize companies to increase their transparency and adaptive capacity for the incorporation of contemporary issues bothering largely on sustainable development, environmental impacts, and corporate social responsibility practices in their framework of reporting so that shareholders are kept abreast of what may pose negative likelihood to their expectations in wealth maximization (BRAAM et al. 2016).

As posited by CARROLL (1991), CSR is perceived as a means by which companies strikes a plethora deal of harmony and collaborations with companies' top executives with the view to integrate information transparency bothering on the environment in their reporting framework as part of their statutory contributions and recourse to legacy. Accordingly, YAO et al. (2011) argue that failure by the company to discharge this societal responsibility properly and adequately may result in negative consequences. CSR changes business practices in a way that maximizes a company's benefit to society and minimizes the risks and costs to society while keeping the company focused on building business and brand value (EPSTEIN-REEVES, 2011 in CSAPÓNÉ et al., 2016).

In line with the growing importance of CSR, the functions, and duties of the boards of directors have been expanded from a traditional shareholder-centric point of view to include a different range of stakeholders. Nowadays, boards are increasingly regarded as responsible for CSR and sustainability issues. Boards of directors affect CSR in several ways, from the development of stakeholder-friendly organizational policy to the formation of committees concerned with CSR-related issues.

In 1970, Friedman perceives a firm as a distinct open system that depends on organizations external to the entity itself and contingencies peculiar to the business environment. It suggests that corporate board diversity maximizes access to critical resources through their skills, competencies, and knowledge (HILLMAN et al. 2007). Organizations with board professionalism are much more likely to have mounted sturdy CSR commitments and are better located to deliver CSR performance (CERES, 2019; MINGUEL, 2017). Furthermore, the expertise of the board members is essential to good corporate governance. Directors with advanced degrees and professional qualifications are more likely to have established strong CSR commitments and are better positioned to deliver CSR performance (CERES, 2019).

Most of the current studies have carved a uniform research direction with concentrations in assessing the nexus between foreign directorships and economic performance of the company (DANIEL et al. 2013; ESTELYI and NISAR, 2016; MILETKOV et al. 2013; OXELHEIM and TROND, 2003) however, this current study investigated divergence of directorship nationality as surrogacy for assessing both companies internal and external CSR performance. The role of women in the boardroom cannot be overlooked in this age. However, a dichotomy in gender disclosures of female directorship tends to impact CSR practices positively through moral substance attributable to corporate legitimacy (RAO and TILT, 2016). NIELSEN and HUSE (2010) argue that women could be more receptive to corporate activities such as CSR and environmental policy. In connection to gender diversity and CSR, most previous researchers found that female directors on the board improve their practice of CSR. For example, HARJOTO et al. (2015) found that boards of directors with greater gender diversity are more effective at monitoring CSR performance from the perspective of stakeholder theory. Diversity of nationalities, educational backgrounds and gender brings divergent priorities in intimacy with corporate goal congruence for decision-making.

According to WANG and BANSAL (2012) enhancing value for the firm and ensuring risk dispersion are largely intimated by strategic adoption of best practices in CSR. On the contrary, investment in CSR practices can be a constraint to a firm's dedication or precipitate potential deviation from their operational norms such as costs thresholds. Furthermore, firm value and corresponding trends in share price may appreciate as a result of the socioeconomic advantages arising from transparent disclosures (FAUZI, 2008).

According to EMMANUEL et al. (2019), firm value is broadly seen as an economic model showing the aggregate market value of firms. Moreover, it is the sum interest in aggregate of shareholders of a company especially creditors and shareholders. Many corporate leaders believe that there must be symmetry between shareholder value and corporate board diversity (Carter ET AL. 2003). On the contrary, BHAGAT and BLACK (2000) opined that "changes in corporate value (and presumably shareholder value) cannot be statistically attributed solely to the presence or absence of a small number of individuals of any background on a board of directors," and such is not substantive enough to justify processes involved in determining the bond between corporate board diversity and value creation for shareholders.

As posited by JOSEE et al. (2014); KUZEY and UYAR (2016); NOBANEE and ELLILI (2016), their empirical studies encompass capital sophistication in diversities including those with backgrounds in institutional and legal frameworks. According to NWOBU (2015), positive sustainability reporting erodes a significant correlation with shareholder funds. While BOUBAKER et al. (2014) focused on firm performance and corporate board gender dichotomy, EFFIONG et al. (2019)

on the other hand, focused on triple bottom line reporting and shareholders' value. CHEN and LEE (2017); YANG et al. (2020) focused on environmental information disclosure on the firm value. In these empirical studies, the prevalence of ambiguity arising from conceptual contradictions and non-conclusive reporting is stemmed from apparently dwindling negative and positive statistical significance. However, due to nonexistence or relatively scanty literature, this study is believed to pioneer the contemporary debates on this subject matter examining the mediating effect of CSR on the nexus between firm value and corporate board dichotomy. This study will examine the direct and indirect effect of board dichotomy on firm value where CSR mediates the relationship.

Furthermore, there have not been many arguments in the literature about the relationships between the representation of foreign directors on board and the strategic implementation of the corporate environmental, social, and ethical duty. In addition, this study use amount spent on CSR activities as a measurement of CSR which has previously received little consideration. Till now, a large number of CSR researchers have used CSR disclosure as a measurement. Previous empirical studies limited their scope to corporate board and gender dichotomy only (YASEEN et al. 2019). Therefore, this research closes this gap by using three aspects of board diversity (Gender, Professionalism and Nationality) analyzing their effect on the mediator (CSR spending) and the dependent variable (firm value).

In addition, the background of this study is premised on a theoretical framework encompassing stakeholder theory. Stakeholder theory imbibes the notion that firms should be environmentally and socially liable. Additionally, having a more diverse board with knowledge and experience will help reduce interagency conflict and ensure owner resources are managed effectively. Therefore, stakeholder theory relates with the reality that a firm's decision is influenced by interconnectedly identified groups with a proprietary interest in firm management. Likewise, FREEMAN et al. (2004) perceived that firm value creation is intimated with value creation for shareholders, this implies that business connotes the idea that creates room for all externals to the entity in achieving goals symmetrical with the performance of the firm. Therefore, this study tends to examine the mediating role of CSR on the relationship between firm value and board diversity of listed environmentally sensitive firms in Nigeria.

Figure 1: Variables Framework

Source: Own construction, 2021

The above theoretical framework (Figure 1) explains how CSR mediates the nexus between Firm Value and Board Diversity. Thus, hypotheses are stated as follows:

H_1: Board professionalism has no significant effect on firm value.

H_2: Board nationality has no significant effect on firm value.

H_3: Board gender has no significant effect on firm value.

H_4: CSR has no mediating effect on the nexus between firm value and board diversity.

MATERIALS AND METHODS

In brevity, this paper employed a correlation research design to underpin the statistical justifications. However, the baseline for the study population was premised on 12 oil and gas firms that are highly environmentally sensitive due to the nature of their operations and have long years of trading results in the Nigeria Stock Market as of 31st December 2019. However, four (4) of the firms were filtered out due to the unavailability of data in their financial statement. Annualized panel dataset was extracted from the oil and gas firms' end-of-year financial reports and the Nigerian stock exchange for a period of 2012-2019. These firms include Eterna Oil Plc, 11Oil Plc, Forte Oil Plc, Japaul Oil Plc, MRS Oil Plc, Oando Plc, Total Oil Plc and Conoil Plc (NIGERIA STOCK EXCHANGE, 2021). This sector was considered highly environmentally sensitive due to the nature of its operations and impact on biodiversity (UGOCHUKWU and ERTEL, 2008).

For data analysis, the research employed multiple regressions on the panel data. Further diagnostic tests were conducted to ensure that the analysis is the best linear unbiased estimate (BLUE) and that appropriate technique were selected for the interpretation (WOOLDRIDGE, 2012). Among the tests carried out in addition to the Multicollinearity test, Autoserial Correlation, Heteroskedasticity and Normality based on the recommendation of (WOOLDRIDGE, 2012) are the Hausman tests that make this study go by random effect since the test is insignificant. Additional tests are also performed, such as the LM test, to decide between random effect and robust OLS, then generalized least squares (GLS) and Panel Corrected Standard Error for the two models. The time frame coincided with a growing dialogue on CSR and diversity in the corporate board, accompanied by the enactment of the related regulation. The dependent variable is denoted by firm value which is proxied by Tobin's Q expressed as the aggregate sum of firm's stock values and the proportion of the firm total debt to firm's total asset in value (AL-MATARI et al., 2012), and the mediator corporate social responsibility, measured as the total expenditure spent on the CSR in the financial statement (AWODIRAN and KAREEM, 2019). The explanatory variables for this study comprised of three board diversity dimensions (board professionalism, board gender dichotomy and board nationality). However, board gender dichotomy is expressed as the proportion female director bears to the aggregate sum of all directors present in the board composition for each year of observation as
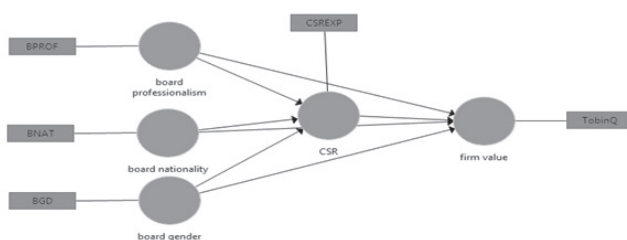
supported by Oh et al. (2019). Board professionalism is measured by the proportion of members with professional qualifications bears with the aggregate sum of all directors in the board composition (HARJOTO et al., 2015). Board nationality is expressed as the proportionate sum of all foreign directors bears to the total of all directors in the board composition (ANAZONWU et al. 2018). To this effect, the model specification compatible with all these variables is expressed below:

$$FV_{it} = \beta 0 + \beta_1 CSR_{it} + \beta 2 BPROF_{it} + \beta_3 BNAT_{it} + \beta_4 BGD_{it} + E_{it} \quad (1)$$
$$CSR_i = \beta 0 + \beta_1 BPROF_{it} + \beta_2 BGD_{it} + \beta_3 BNAT_{it} + E_{it} \quad (2)$$

Where:

FV	= Firm Value.
CSR	= Corporate Social Responsibility.
BPROF	= Board Professionalism.
BNAT	= Board Nationality.
BGD	= Board Gender Diversity.
$\beta 0$	= Intercept.
β_1 to $\beta 4$	= Coefficient of the independent and control variables.
ϵ	= Error term.
it	= Subscript for Panel Data

RESULTS AND DISCUSSION

Data collected during the study are presented and discussed in this section. The descriptive statistics, correlation matrix and inferential statistics are presented in this section. The hypothesis formulated for the study was tested to institute the degree of significance between board diversity and CSR.

Table 1: Descriptive Statistics

	Mean	Std. Dev.	min	max	Median	Skewness	kurtosis
Tobinq	.114	.28	.006	2.132	.047	6.172	43.826
Csr	27113324	48242336	0	1.734e+08	4333316.5	1.891	5.14
Bprof	.139	.113	0	.375	.125	.428	2.302
Bnat	.181	.21	0	.636	.106	1.03	2.65
Bgd	.138	.085	0	.286	.143	-.254	2.134

Source: summary of STATA output, 2021

From the table presented above (Table 1), the firm value proxied by Tobin's Q has an average mean of 0.114, which is a deviation from the mean of 0.28. This shows that the firm value variable is normally distributed due to deviation from the average mean. The median is 0.047 with a corresponding minimum and maximum of 0.06 and 2.13. This means that listed highly environmentally sensitive firms have a maximum value disclosed in the financial statement to the extent of 2.13.

Also, the average amount spent on corporate social responsibility across the environmental sensitive firms is ₦27million ($70,773.26). The standard deviation of ₦48million ($125,918.15) shows that there is large dispersion across the sampled firms regarding the extent of social responsibility involvement. The median is ₦4million ($10,493.18) with the corresponding minimum and maximum values of ₦0 and ₦17million ($44,596.01)

respectively. The minimum spending of ₦0 could be as a result of the fact that some oil and gas firms spending on environmental disclosure could be insignificantly low for a particular year and therefore, may not need to be disclosed for the financial year.

The average of sampled firms' board professionalism is 13.9% with a standard deviation of 11.3%. The difference between the mean and the standard deviation is 2.6%. It means that there is low dispersion across the sampled environmental sensitive firms in Nigeria. The minimum and maximum proportions are 0% and 37.5% respectively, while the median is 12.5%. The mean value of foreign directors across the listed sensitive firms is 18.1%, while the deviation value of 21.0% indicates that there is a moderate deviation of the data from the mean. The median is 10.6%, with the corresponding maximum and minimum proportion of foreign director of the listed environmental sensitive firms in Nigeria within the period covered were 63.6% and 0% respectively. The average board of the sample firms is more diverse in terms of nationality as compared to other diversity dimensions. Finally, board gender diversity has an average of 13.8% and the low standard deviation of 8.5% as compared with the mean shows that there is low dispersion in the proportion of gender diversity that constitutes the members of the board across sampled firms. The median is 14.3%, with the corresponding minimum and maximum proportions of female directors are 0% and 28.6% respectively.

On the other hand, the values of the skewness are obtained in Table 1 therefore; it means the data is expected to be normally distributed even though it is shown as negatively skewed. The kurtosis value as seen in Table 1 also means the peakness of the distribution is expected to be normal. This is in line with the so many studies which shows how the distribution of the data should be expected through the use of skewness and kurtosis as testing the data could reveal whether the said data is skewed or the kurtosis is abnormal (BAI and NG, 2005; BARATO and SEIFERT, 2015; BLANCA et al. 2013; KOLLO, 2008; MARUYAMA, 2007; RYU, 2011).

Table 2: Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)
(1) tobinq	1.000				
(2) csrexp	-0.132	1.000			
(3) bprof	0.129	0.130	1.000		
(4) bnat	0.217	0.321	-0.034	1.000	
(5) bgd	-0.146	0.476	0.107	-0.279	1.000

Source: summary of STATA output, 2021

From Table 2, there is the existence of a positive correlation between board nationality (BNAT), board professionalism (BPROF) and Tobin's Q. However, corporate social responsibility (CSR) and board gender (BGD) have a negative relationship with Tobin's Q. considering the relationship between CSR as a mediator and explanatory variables. It was found that BPROF, BNAT and BGD are positively related to CSR. More so, a positive relationship

exists between BPROF and BGD. However, there is a negative relationship between BFROF and BNAT; BNAT and BGD respectively. On the other hand, the prevalence of multicollinearity among the variables established a nonsignificant relationship between firm value and CSR. To prove otherwise, however, comparative analysis of tolerance value and variance inflation factor (VIF) is required beyond their benchmark for the rule of thumb. To that effect, tolerance values and variance inflation factor (VIF) are an advanced statistical assessment of the prevalence of multicollinearity among the regressed variable.

Diagnostics Tests

To ensure the validity and reliability of the statistical inference of the regression model, robustness tests were conducted. The robustness tests conducted include a test for multicollinearity, vif, Hausman specification test, autocorrelation heteroskedasticity, normality of residual.

Table 3: Variance inflation factor

	VIF	1/VIF
Csrexp	1.839	.544
Bgd	1.768	.566
Bnat	1.53	.654
Bprof	1.024	.977
Mean VIF	1.54	.

Source: summary of STATA OUTPUT, 2021

From Table 3 presented, the value of variance inflation factors shows a consistent decline below 10, this implies the nonexistence of multicollinearity as a result of the value in the class boundary of 0 to 10. Furthermore, tolerance values also depicted a consistent increase exceeding the 10% benchmark. This substantiates the nonexistence of multicollinearity among the independent variables (NETER et al. 1996; TABACHNICK and FIDELL, 1996). The findings obtained in these empirical studies validate that the nonexistence of multicollinearity does not affect on the statistical inferences extracted from this study.

Table 4: Model One (Indirect Effect):
FVit = ʄ(CSREXP+BPR+BNAT+BGD)

Tests	Hettest	Autocorr	SWilk	Ovtest
Chi2	4.200	1.403	0.882	1.63
P-value	0.000	0.275	0607	0.193
Mode Two (Direct Effect): CSREXP$_{it}$ = ʄ(BPR+BNAT+BGD)				
Chi2	4318.10	23.056	0.294	2.72
P-value	0.000	0.0018	0.998	0.530

Source: summary of STATA OUTPUT, 2021

The study adopted Wooldridge to test for the existence of heteroskedasticity. The study revealed that Chi-Square of 4.200 for Model One and 4318.1 for Model Two with the corresponding P-value of 0.000 for Model One and Two implies the presence of heteroskedasticity; it also means that the constant residual (homoscedastic) and the null hypothesis are rejected. The presence of auto/serial

correlation violates the assumption of longitudinal data which is one key attribute of panel data. The Wooldridge test for autocorrelation was adopted to test for the presence/absence of auto/serial correlation. The criteria were to accept Ho = No Autocorrelation if P-value is greater than 5% and accept H$_1$= Presence of Autocorrelation if P-value is less than 5%. The result obtained from the table above shows that there exists no issue of Auto/serial correlation in Model One as the P-value (0.275) is greater than 5%, while Autocorrelation was found in Model Two as the P-value (0.0018) is less than 5%. The results of Ovtest from Table 4 show that there was no misspecification as the P-values are greater than 5%. In addition, the Normality distribution of the data is another paramount assumption of linear regression where it is considered as a condition for parametric test analysis. This is because, one of the parametric test conditions is that, the data must be normally distributed across the variables for the test to stand for generalization (PARK, 2008). However, it was argued that the normality is to be conducted on the residuals of the model and not the data where the dependent variable determines the parametric analysis to be conducted (GHASEMI and ZAHEDIASL, 2012). Thus, this study conducted a normality test on the residuals of the model using Shapiro Wilk. Since the value is greater than 0.05 as indicated on the table at a 5% level of significance, therefore, the null hypothesis that the data is normally distributed across the model cannot be rejected.

Table 5: Model One Regression Results

	OLS	RE	FE	Hausman
Constant	-1.728**	-1.277	-0.726	
Csr→Fv	1.961**	1.227	0.549	
Bprof→Fv	-1.399	-1.429	-1.440	
Bnat→Fv	-0.055	-0.025	0.015	Chi2 = 1.50
Bgd→Fv	-3.150	-7.580	-1.800	P-v = 0.681
Model Two	**OLS**	**RE**	**FE**	**Hausman**
Constant	0.467***	0.474***	0.529***	
Bprof→CSR→Fv	0.448**	0.309**	0.238*	
Bnat→CSR→Fv	0.028*	0.034**	0.040***	Chi2 = 12.06
Bgd→CSR→Fv	0.39e-09**	1.69e-09	1.41e-09	P-v = 0.0024

*** P-value is less than 0.01, ** P-value is less than 0.05,

* P-value is less than 0.1 %

Source: summary of STATA OUTPUT, 2021

Table 5 shows the summary of the regression result and the Hausman specification test to ensure an appropriate technique is selected. The study conducted the Hausman specification test after fixed and random tests were carried out for the first and second models. The essence of the Hausman specification test is to choose an alternative model preferably between random and fixed-effect models. Hausman specification test conducted produced a p-value of 0.681 for Model One, which is insignificant. This implies that variation among the sampled firm is presumably random and congruent with an independent variable in

the model specification and presumably random. The result of Hausman for the second Model was in favor of fixed effect as it is statistically proved with a P-value of 0.0024. Due to the presence of heteroskedasticity, the study further conducts a generalized least square (GLS) model which overcomes the heteroskedasticity issues. Thus, this study report GLS model results as suggested by (Wooldridge, 2012) based on the issues raised for Model One and Panel Corrected Standard Error (PCSE) for Model Two.

Table 6: Model One (Firm Value Dependent Variable),
Cross-sectional time-series FGLS regression

Tobinq	Coef.	St.Err.	t-value	p-value	Sig
Csrexp→Fv	1.961	.9	2.18	.029	**
Bprof→Fv	-1.38	1.206	-1.14	.253	
Bnat→Fv	-.055	.106	-0.52	.603	
Bgd→Fv	-3.15e-09	8.50e-09	-0.37	.711	
Constant	-1.729	.694	-2.49	.013	**
Mean dependent var		-0,656	SD dependent var		3.104
Number of obs		64.000	Chi-square		5.080
Prob > chi2		0.2794	Akaike crit. (AIC)		330.723

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: summary of STATA OUTPUT, 2021

From Table 6, there is evidence of a significant relationship between firm value and CSR provided one considers the p-values. This indicates that the variable is statistically significant. From the result of the GLS estimations, the relationship between firm value and CSR is positive and is also statistically significant at 5%. This is a clear indication that an increase in CSR will bring about an improved firm value with the economic assumption of other things being the same. This is because high-quality CSR disclosure influences investors' as well as lenders' decisions because their risk assessment and the potential return on investment determine the placement of their fund. Furthermore, corporate transparent reporting of environmental issues justifies firm compliance with ethical and legal requirements. This agreed with the hypothesis formulated and is in line with the proposition of the stakeholder theory. This provides the basis for rejecting the null hypothesis which states that, CSR has no significant influence on firm value.

Finally, board professionalism, board nationality and board gender were found to be negative and statistically insignificant as proved by the p-values of 0.253, 0.603 and 0.711 respectively. This implies that the effect of board diversity poses no statistically and direct significance on firm value. This is against our apriori expectation and proposition of stakeholder theory that the perceived notion behind trade and value creation is in the best interest of value creation for shareholders when the board is diverse. On this basis, the study failed to reject a null hypothesis that says, the effect of board professionalism, board nationality and board gender poses no significance on firm value.

Table 7: Model Two (CSR Mediator), Correlated Panels Corrected
Standard Errors (PCSEs)

Csrexp	Coef.	St.Err.	t-value	p-value	Sig
Bprof→CSR→Fv	.448	.148	3.03	.000	***
Bnat→CSR→Fv	.028	.014	1.99	.046	**
Bgd→CSR→Fv	3.39e-09	5.8e-10	5.80	.000	***
Constant	.467	.062	7.53	.000	***
Mean dependent var		0.656	SD dependent var		3.104
Number of obs		64.000	Chi-square		76.82
Prob > chi2		0.0000	R-squared		0.2978

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: summary of STATA OUTPUT, 2021

The result in Table 7 shows the result obtained from the Panel Corrected Standard Error Regression (PSCE) which was interpreted after performing all relevant tests. The R-squared coefficient of determination was 0.2978, indicating that approximately 29.78% of the variation in CSR as approximated to the actual amounts of CSR was caused by variations in the independent variables explained by the model. This means that board gender diversity (BGD), board professionalism (BPROF), and board nationality (BNAT) together accounted for 29.78% of spending on CSR of Nigerian listed oil and gas companies and it is statistically significant at 1% as indicated with a p-value of 0.0000. And the remaining 70.22 percent was due to other factors not included in the equation but measured by the error term. Furthermore, the result shows that board professionalism (BPROF), board nationality (BNAT) and board gender diversity (BGD) are positively and significantly correlated with CSR as indicated by the coefficient of 0.448, 0.028 and 3.39e-09 with the p-values of 0.000, 0.046 and 0.000 respectively. This implies that all the explanatory variables significantly influence CSR and invariably will influence firm value. This is because the heterogeneous board may improve the board's monitoring function. After all, board diversity increases the independence of the board. Educational pedigree and divergent nationality pose variations in priorities affecting corporate objectives and how it translates into the firm's decision-making at the instance of board resolution. More so, a firm with a high proportion of females directly may have more tendencies to engage in CSR to portray a good image of their natural being and invariably improve the firm value. This provides evidence to reject null hypotheses which state that board professionalism (BPROF), board nationality (BNAT) and board gender diversity (BGD) have no significant effect on corporate social responsibility (CSR). This empirical result corroborates with stakeholder theory propositions.

CONCLUSIONS

The study objective aligns with the title which extends to demonstrate that there is a mediating effect of Corporate Social Responsibility on the relationship between Board Professionalism, Board Nationality, Board Gender and Firm's Value separately and collectively based on the evidence from

Nigerian highly environmentally sensitive firms from 2012 to 2019 inclusive. Thus, looking at the direct resultant effect of board diversity on corporate value, the Generalised Least Square regression result shows that Board Professionalism, Board Nationality, Board Gender have no significant impact on firm value. The study, therefore, concludes that board diversity does not significantly determine corporate value. While on the other hand, Corporate Social Responsibility was found to be statistically significant. Therefore, the study concludes that CSR significantly determines corporate value. Furthermore, considering the indirect effect using the results from Panel Corrected Standard Error showed that CSR mediates board diversity effect on corporate value. Specifically, the findings demonstrated that board diversity affects corporate value and CSR positively. In abridged expression, this empirical finding demonstrates good or bad CSR performance. Rather, board diversity gains priority when considering investment destinations by corporate investors. To this effect based on the practical implication for decision making, this study advocates that CSR is pertinent in establishing relationship nexus between corporate value and board diversity. Therefore, gross insubordination to the practical implication in the relationship between corporate value and board diversity may deter opportunity for making spurious economic decisions. It is therefore suggested that a firm's sensitivity to environmental issues will aid balance diversity in corporate board composition because it is critical for assessing stakeholder's relationship and firm commitments to environmental instrumentations.

However, this empirical study is believed to have pioneered the concept and offers a new direction for future research. Major findings established in this study will guide and provide practical implications for researchers and practitioners. The truth and fair view posited in this study will assist both non-ethically and ethically oriented investors who have proprietary interests in the firm's performance. In aversion, the likelihood of managers exploring a plethora deal of opportunities for maximizing corporate attractiveness for investors consideration is high, especially where the justification for their corporate and social programs are characterized by financial peculiarities. To this effect, this empirical investigation brings to the frontier of a new direction for scholarly debates in understanding how board diversity is imperative for overseeing and assessing management performance. However, the findings corroborate the demands for raising the bar of board diversity by regulators on a global scale.

Finally, practical implications of this study provide the wherewithal for the selection process of corporate directorship based on evidence established in this empirical highlight of the pertinent consideration of diverse pedigree of nominees for corporate board positions. And to regulators, it will expose them to board range dimensions that can impact firm's involvement in CSR and invariably firm value. Accurate practices will position the firms in the right direction, which will eventually result in a great reduction of social and environmental pressure. The study recommends that future studies may be conducted in other countries.

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